

The Science Definition Team SDT for the Arctic-Boreal Vulnerability Experiment (ABOVE) met for the first time on May 1-2, 2013, in La Jolla, CA.

The ABoVE SDT is responsible for developing a *Concise Experiment Plan* for this next Terrestrial Ecology field campaign.

The ABoVE SDT will:

- ❖ Refine the science questions to be addressed
- ❖ Provide a compelling rationale for the scientific and societal importance of the study
- ❖ Define the research approach/strategy
- ❖ Provide a reasonably detailed study design and description of required field and remote sensing observations, field infrastructure, logistics, and data management capabilities



The objectives for the meeting were:

- ❖ Beginning to refine the primary science question(s) for ABoVE (from the perspectives of both ecosystem science and societal impacts)
- ❖ Organizing the work of the SDT to prepare for developing all components of the *ABoVE Concise Experiment Plan*

Chief results of the meeting:

- ❖ A conceptual “Vulnerability Framework” for ABoVE science (including a first draft concept diagram)
- ❖ A first draft overarching science question:
How vulnerable and resilient are ecosystems and society to environmental change in Arctic and boreal regions?
- ❖ Identification of key ecosystem services that would be addressed in ABoVE
- ❖ Tasking of subgroups of the SDT to:
 - ❖ Write text to document the vulnerability framework and science questions
 - ❖ Explore the opportunities and constraints that will affect the ABoVE field campaign study design and become familiar with available information.



Arctic-Boreal Vulnerability Experiment

Remote sensing data will be essential for ABOVE.

- Improved maps of key characteristics of the land, ocean and atmosphere
- Providing a means to monitor and analyze variations over time
- Tools for spatial and temporal extrapolation and scaling
- Input data for models



Billings, Sharon - U. of Kansas
Boelman, Natalie - Columbia U.
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Fisher, Joshua - Jet Propulsion Lab
Goetz, Scott - Woods Hole Research Center
Grosse, Guido - U. of Alaska, Fairbanks
Hall, Forrest - U. of Maryland, Baltimore County
Harriss, Robert - Houston Advanced Research Center
Hayes, Daniel (Co-Chair) - Oak Ridge National Lab
Karchut, Jeremy - National Park Service
Kasischke, Eric (Co-Chair) - U. of Maryland

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Metsaranta, Juha - Natural Resources Canada
Miller, Charles - Jet Propulsion Lab
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